

# CLAIMS

## What Is Claimed Is:

1 1. A lighting apparatus for a liquid crystal display  
2 comprising:

3 a. an array of light emitting diodes disposed  
4 alongside said liquid crystal display for providing  
5 illumination thereof;

6 b. light pipes for transmitting light from said  
7 light emitting diodes across a plane parallel with said  
8 liquid crystal display; and,

9 c. a filter disposed between said array and said  
10 light pipes for filtering out infra-red light from said  
11 light emitting diodes.

1 2. An apparatus as in Claim 1 wherein said array of  
2 light emitting diodes include diodes emitting only red  
3 light.

1 3. An apparatus as in Claim 1 wherein said array of  
2 light emitting diodes include diodes emitting only blue  
3 light.

1 4. An apparatus as in Claim 1 wherein said array of  
2 light emitting diodes include diodes emitting only green  
3 light.

1 5. An apparatus as in Claim 1 including a pair of light  
2 emitting diode arrays disposed on two sides of said light  
3 pipes.

1 6. An apparatus as in Claim 5 including a pair of infra-  
2 red filters disposed between each of said arrays of light  
3 emitting diodes and said light pipes.

1 7. An improved lighting apparatus for a liquid crystal  
2 display in the cockpit of an aircraft, said apparatus  
3 comprising:

4 a. a pair of light emitting diode arrays disposed  
5 alongside said liquid crystal display for providing  
6 illumination thereof;

7 b. light pipes for transmitting light from said  
8 light emitting diode arrays across a plane parallel with  
9 and alongside said liquid crystal display; and,

10 c. filters disposed between each of said arrays and  
11 said light pipes for filtering out infra-red light from  
12 said light emitting diodes.

1 8. An apparatus as in Claim 7 wherein each of said  
2 arrays of light emitting diodes include diodes emitting  
3 only red light.

1 9. An apparatus as in Claim 7 wherein each of said  
2 arrays of light emitting diodes include diodes emitting  
3 only blue light.

1 10. An apparatus as in Claim 7 wherein each of said  
2 arrays of light emitting diodes include diodes emitting  
3 only green light.

1 11. A method for illuminating a liquid crystal display  
2 for viewing by:

3 a. activating an array of light emitting diodes of  
4 a first color adjacent light pipes disposed alongside said  
5 liquid crystal display; and,

6 b. filtering infra-red light emitted by said array  
7 of light emitting diodes.

1 12. The method as in Claim 11 wherein said first color is  
2 red.

1 13. The method as in Claim 11 wherein said first color is  
2 green.

1 14. The method as in Claim 11 wherein said first color is  
2 blue.

1 15. A method for illuminating a liquid crystal display in  
2 an aircraft cockpit for viewing by a pilot wearing infra-  
3 red goggles, said method comprising:

4 a. activating an array of light emitting diodes  
5 adjacent light pipes disposed alongside said liquid  
6 crystal display;

7 b. filtering infra-red light emitted by said array  
8 of light emitting diodes; and,

9 c. switching colors of said light emitting diodes  
10 as required by a pilot of the aircraft.

1 16. The method as in Claim 11 wherein said step of  
2 switching colors further includes switching on only those  
3 light emitting diodes emitting red light.

1 17. The method as in Claim 11 wherein said step of  
2 switching colors further includes switching on only those  
3 light emitting diodes emitting blue light.

1 18. The method as in Claim 11 wherein said step of  
2 switching colors further includes switching on only those  
3 light emitting diodes emitting green light.